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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/630,425	08/01/2000	Stefano Faccin	017.38841X00	5695
20457	7590	11/30/2004	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889			CHA1, LONGBIT	
			ART UNIT	PAPER NUMBER
			2131	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

09/630,425

Applicant(s)

FACCIN ET AL.

Examiner

Longbit Chai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2004.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-16 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 01 August 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1 – 16 have been presented for examination. Claims 1 – 16 have been amended in an amendment filed 07/23/2004. Claims 1 – 16 have been examined.

### ***Response to Arguments***

1. Applicant's arguments with respect to the subject matter of the instant claims have been considered but are not persuasive.

2. Regarding the issue that Turunen presents the evidence of motivation to combine 3G TS 33.102 (3G Security, TS 33.102 Version 3.5.0 Release 1999) with Handley (SIP, IETF RFC 2543, March 1999). Applicant concurs with Examiner in Turunen's disclosure indicating there is a problem with the Internet involving authentication/encryption keys, which may be improved by allocating new authentication/encryption keys to a mobile host on a regular basis such as every time a mobile host makes a new access request (Remarks: see Page 9 & 2<sup>nd</sup> Paragraph). Applicant asserts that Turunen fails to suggest "anything pertaining to the authentication of UA with the SIP protocol and specifically how the SIP protocol may be authenticated using the UMTS AKA mechanism". However, this argument is not persuasive because (a) 3G TS 33.102 discloses in the IP world (or Internet world) there are currently two solutions that supports Voice over IP (VoIP) which are SIP and H.323 (3G TS 33.102: see for example, Introduction section), (b) Examiner notes the authentication is always inherently as part of the encryption

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key change process – i.e. an successful authentication must be assured first before the encryption key change begins (e.g. well-known SSL (Secured Session Layer Protocol), GSM, and etc.), (c) 3G TS 33.102 indeed provides a method allocating new authentication/encryption keys to a mobile host on a regular basis such as every time a mobile host makes a new access request as taught by Turunen – motivation of combination, and (d) Once the motivation / reason to combine 3G TS 33.102 with SIP becomes obvious, with respect to how the SIP protocol may be authenticated using the UMTS AKA mechanism, the implementation details may be either rendered obvious or lie fully within the normal capabilities of one skilled in the art due to the limited design options (for example) there are only two available response header fields in SIP that relates to authentication recited in the claim limitation – i.e. Proxy-authenticate and WWW-authenticate and the obvious existing authentication parameters RAND (Random Number) and AUTN (Authentication Token) in 3G TS 33.102 (3G TS 33.102: inter alia, Section 6.3.3 & Figure 8).

### ***Drawings***

8. The following informality has been noted and requires correction in response to this Office Action. The message “401 Unathorized” shown on Figure 1 has spelling error. It should be labeled as “401 Unauthorized”.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Handley (SIP, IETF RFC 2543, March 1999), hereinafter referred to as Handley, in view of 3G TS 33.102 (3G Security, TS 33.102 Version 3.5.0 Release 1999), hereinafter referred to as 3G TS 33.102, and evidenced by Turunen (U.S. Patent Number 6,477,644).

As per claim 1 and 9, Handley teaches authenticating a user agent to a server using SIP (Session Initiation Protocol) messages, the method comprising:

a. *forwarding an SIP request from the user agent to the server* (Handley: inter alia, Section 1.4).

b. *forwarding a request for authentication from the server to the user agent in response to the SIP request, the request for authentication including information* (Handley: inter alia, Section 6.42 and Section 7.4.8).

c. *forwarding an authentication response from the user agent to the server in response to the request for authentication* (Handley: inter alia, Section 6.11 and Section 6.27).

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d. *performing an invoked SIP procedure on the server in response to the SIP request if the authentication is deemed successful in view of the authentication response* (Handley: inter alia, Section 7 and Section 5.1.1).

Handley discloses SIP authentication scheme that includes currently existing HTTP-Basic, PGP and MD (See inter alia, Section 14.2, Section 15.1 and Section 14.3, respectively). Handley also discloses specifications for the associated request and response header fields to carry the authentication parameters in the SIP messages (See inter alia, Section 6.26, Section 6.42, Section 7.4.2, and Section 7.4.8). Handley does not explicitly disclose the authentications associated with mobile systems listed as follows:

a. *the authentication performed using a Universal Mobile Telecommunications System (UMTS) Authentication and Key Agreement (AKA) mechanism.*

b. *an authentication response from the user agent to the server in response to the request for authentication in accordance with the UMTS AKA mechanism.*

3G TS 33.102 teaches the mobile system authentication mechanisms:

a. *the authentication performed using a UMTS (Universal Mobile Telecommunications System) AKA (Authentication and Key Agreement) mechanism* (3G TS 33.102: inter alia, Section 6.3.2).

*b. an authentication response from the user agent to the server in response to the request for authentication in accordance with the UMTS AKA mechanism (3G TS 33.102: inter alia, Section 6.3.3 & Figure 8).*

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of 3G TS 33.102 within the system of Handley because Turunen provides the evidences (a) disclosing a corporate user will have the opportunity to make wireless voice and data calls from a mobile terminal via corporate LAN to gain internet access from mobile hosts or terminals (See inter alia, Column 1, Line 65 – 67 and Column 1 Line 36 – 40), (b) disclosing the security problem that the internet is not a secure network and it is possible for third party to intercept internet traffic (See inter alia, Column 3, Line 34 – 36), and (c) teaching a method to improve security is to allocate new authentication / encryption keys to a mobile host whenever a mobile host makes a new internet access request (See inter alia, Column 3, Line 43 – 46).

Therefore, the modification would have been obvious because one of ordinary skill in the art would have been motivated to add UMTS AKA authentications of the mobile systems into existing SIP messages of IP-based networks.

As per claim 2 and 10, Handley-3G TS 33.102 teaches the claimed invention as described above. Handley further teaches the SIP request comprises

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one of a SIP INVITE request or a SIP REGISTER request (Handley: inter alia, Section 4.2.6).

As per claim 3 and 11, Handley-3G TS 33.102 teaches the claimed invention as described above. Handley further teaches *the request for authentication comprises one of a SIP 401 Unauthorized code or a SIP 407 Proxy Authentication Required code* (Handley: inter alia, Section 7.4.2 and Section 7.4.8).

As per claim 4 and 12, Handley-3G TS 33.102 teaches the claimed invention as described above. 3G TS 33.102 further teaches *the request for authentication comprises UNITS AKA RAND (RANDom challenge) and AUTN (authentication token) vectors* (3G TS 33.102: inter alia, Section 6.3.3 & Figure 8). Same rational for combination applies here as above in rejecting claim 1.

As per claim 5 and 13, Handley-3G TS 33.102 teaches the claimed invention as described above. 3G TS 33.102 further teaches further teaches *the RAND and AUTN vectors* (3G TS 33.102: inter alia, Section 6.3.3 & Figure 8). Handley further teaches authentication vectors are *included in an SIP WWW-Authenticate or Proxy Authenticate response header field* (Handley: inter alia, Section 6.4.2 and Section 6.4.6). Same rational for combination applies here as above in rejecting claim 1. The implementation details may be either rendered



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obvious or lie fully within the normal capabilities of one skilled in the art due to the limited design options (for example) there are only two available response header fields in SIP that relates to authentication recited in the claim limitation – i.e. Proxy-authenticate and WWW-authenticate.

As per claim 6 and 14, Handley-3G TS 33.102 teaches the claimed invention as described above. 3G TS 33.102 further teaches *the authentication response comprises one of a UMTS AKA RES (response) code or an RUTS (synchronization failure parameter) code or an error code* (3G TS 33.102: inter alia, Section 6.3.3 & Figure 8). Same rational for combination applies here as above in rejecting claim 1.

As per claim 7 and 15, Handley-3G TS 33.102 teaches the claimed invention as described above. Handley further teaches *the authentication response is included in a SIP Authorization or Proxy Authorization header field* (Handley: inter alia, Section 6.11 and Section 6.27).

As per claim 8 and 16, Handley-3G TS 33.102 teaches the claimed invention as described above. Handley further teaches *the invoked procedure comprises an acknowledgement response comprising a SIP 200 code* (Handley: inter alia, Section 7.2.1).

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Longbit Chai whose telephone number is 571-272-3788. The examiner can normally be reached on Monday-Friday 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Longbit Chai  
Examiner  
Art Unit 2131

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